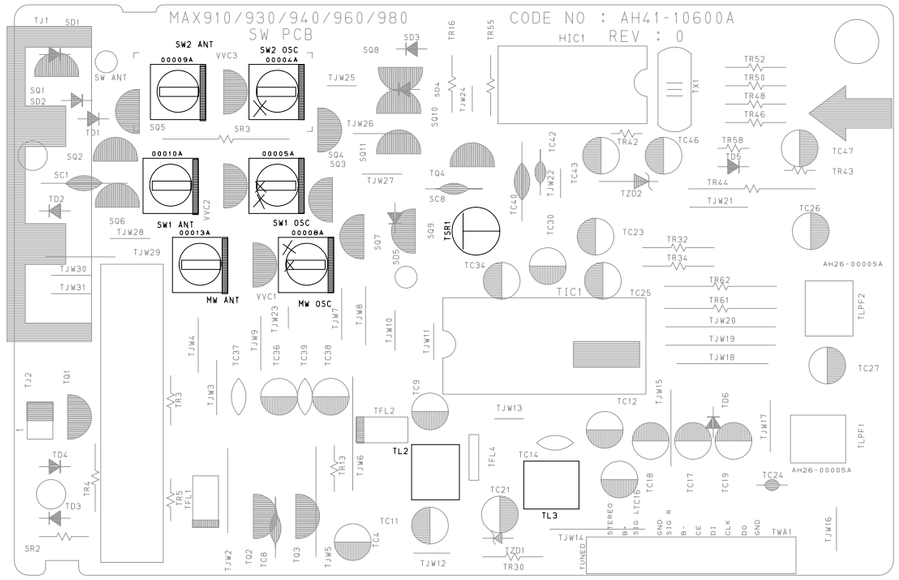
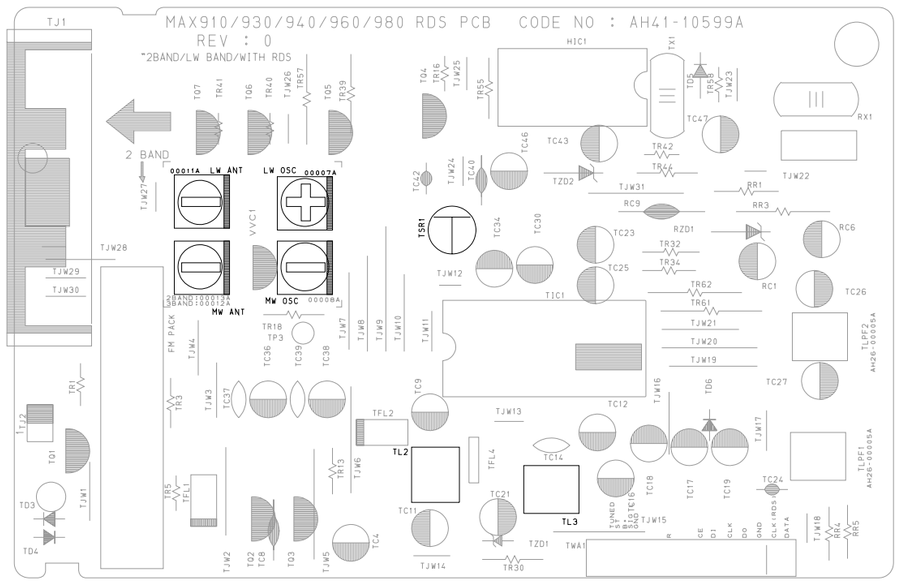
1. Alignment and Adjustments

1-1 Tuner



* Adjustment Location of SW Band



* Adjustment Location of LW Band

FM THD Adjustment	
SSG FREQ.	98 MHz
Adjustment point (TL3)	FM DETECTOR COIL
Output	60 dB
Minumum Distortion (0.3% below) (Figure 1-1)	

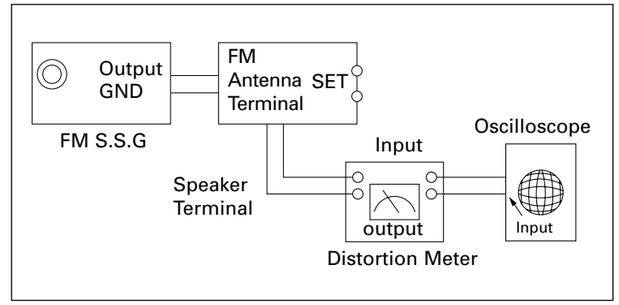


Figure1-1 IF CENTER and THD Adjustment

FM Search Level Adjustment	
SSG FREQ.	98 MHz
Adjustment point (TSR1)	BEACON SENSITIVITY SEMI-VR(5KΩ)
Output	23 dB
Adjust TSR1 so that “TUNED” of FLT is lighted (Figure 1-2)	

*Adjust FM S.S.G level to 23dB

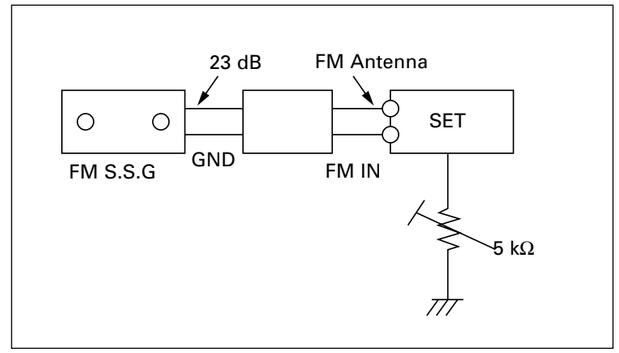


Figure1-2 FM Auto Search Level Adjustment

AM(MW) I.F Adjustment	
SSG FREQ.	450 kHz
Frequency	522 kHz
Adjustment point (TL2)	AM I.F COIL
Maximum output (Figure 1-3)	

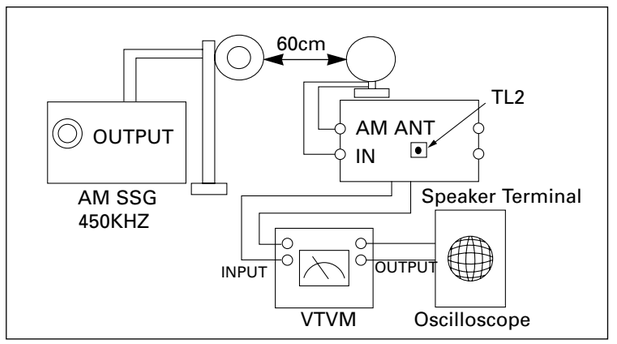


Figure1-3 AM I.F Adjustment

1-1-2 AM(MW),LW,SW1,SW2 Adjustment

	Circuit to be Adjusted	Measuring Instrument & Arrangement	Step	S.S.G Frequency	Radio dial Setting	Adjusting Point	Adjust for
AM (MW)	OSC	Connect AM signal generator to loop antenna,VTVM AND oscilloscope (Fig 1-3)	1	522KHz	522KHz	MW OSC	Aduust for 1.0V±0.1V at the low. (IR117)
			2	1611KHz	1611KHz	MW OSC	Check for 7.0V±1.0V at the high. (IR117)
	RF	"	1	594KHz	594KHz	MW ANT	Maximum out
	INTER FREQ	"	1	455KHz	522KHz	TL2	Maximum out
LW	OSC	Fig 1-3	1		146KHz	LW OSC	Aduust for 2.0V±0.1V at the low.
			2		290KHz	LW OSC	Check for 7.0V±1.0V at the high.
	RF		1	150KHz	150KHz	LW ANT	Maximum out
SW1	OSC	Fig 1-3	1		2.3MHz	SW1 OSC	Aduust for 1.0V±0.1V at the low.
			2		7.3MHz	-	Check for 8.5V±1.0V at the high.
	RF		1	3.5MHz	3.5MHz	SW1 ANT	Maximum out
SW2	OSC	Fig 1-3	1		9.5MHz	SW2 OSC	Aduust for 1.5V±0.1V at the low.
			2		26.1MHz	-	Check for 8.0V±1.0V at the high.
	RF		1	10MHz	10MHz	SW2 ANT	Maximum out

1-2 Cassette Deck

1-2-1 To Adjust Tape Speed

Notes

1) Measuring tape: i) MTT-111 (or equivalent)
(Tapes recorded with 3kHz)
ii) MTT-5512 (or equivalent)
2) Connect the cassette deck to the frequency counter as in figure 1-4.

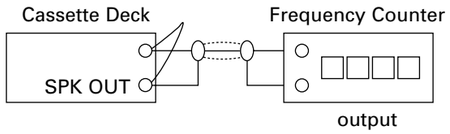


Figure 1-4

Step	Item	Pre-Setup Condition	Pre-Setup	To Adjust	Standard	Remark
1	NOR SPEED Control	OUT (connected to the frequency counter)	1) Deck 1:MTT-111 2) Press PLAY SW button 3) Deck 2:Same as above	Turn CVR1 to left and right	3KHz	Fig1-8
2	HI SPEED Control	Same as above	1) Deck 1:MTT-111 2) Deck 2:MTT-5512 3) Press DUBBING SW button two times.	Turn CVR2 to left and right	6KHz	Fig1-8

To Adjust Recording Level

Step	Item	Pre-Setup Condition	Pre-Setup	To Adjust	Standard	Remark
1	BIAS Electric current	Connect to JCW2 as in Figure 1-7 and read the VTVM	Insert MTT-5512 into Deck2, then press REC button.	L-CH: JSR1L and R-CH: JSR1R to the right and left	25 mV	See diagram for adjustment locations

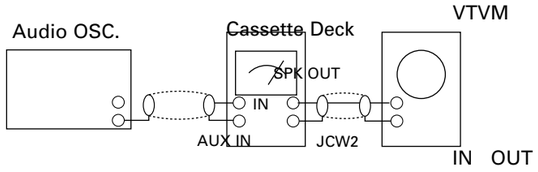


Figure 1-7

1-2-2 To Adjust PlayBack Level

Notes

1) Before the actual adjustment, clean the play/recording head.
2) Measuring tape :
i) MTT-114NA(or equivalent 12.5kHz AZIMUTH control)
ii) MTT-150(or equivalent : Dolby level 200nwb/m)
3) Dolby NR SW OFF
4) The cassette deck is connections as shown in figure 1-6.

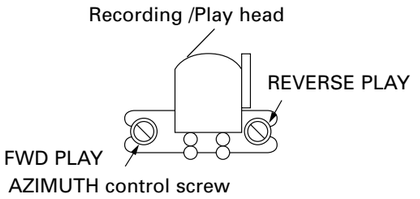


Figure 1-5

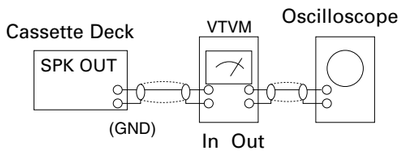


Figure 1-6

① Adjust Deck 1 Play Level

Step	Item	Pre-Setup Condition	Pre-Setup	To Adjust	Standard	Remark
1	AZIMUTH	TP1 OUT (VTVM is connected to the scope)	After putting MTT-114NA into Deck 1 1) Press FWD PLAY button. 2) Press REV PLAY button.	1) Turn the control screw to as shown in Figure 1-5. 2) Adjust the right control screw to playback REV. Mode	Max output and same phase (both channels)	After adjustment secure it with REGION LOCK.
2	PlayBack out Level	Same as above	PLAY MTT-150 on Deck 1.	L-CH:Turn JSR2L to the right and left R-CH:Turn J SR2R to the right and left	Adjust to level and same Aux level.	See the diagram for adjustment locations.

② Adjust Deck 2 Play Level

Step	Item	Pre-Setup Condition	Pre-Setup	To Adjust	Standard	Remark
1	AZIMUTH	TP1 OUT (VTVM is connected to the scope)	After putting MTT-114NA into Deck 2 1)Press FWD PLAY button. 2)Press REV PLAY button.	1) Turn the control screw to as shown in Figure 1-5. 2)Adjust the right control screw to playback REV. Mode	Max output and same phase (both channels)	After adjustment secure it with REGION LOCK.
2	PlayBack out Level	Same as above	PLAY MTT-150 on Deck 2.	L-CH:Turn JSR3L to the right and left R-CH:Turn JSR3R to the right and left	Adjust to level and same Aux level.	See the diagram for adjustment locations.